Catalogue of American Amphibians and Reptiles.

Smith, H.M. and D. Chiszar. 2001. *Pliocercus dimidiatus*.

Pliocercus dimidiatus Cope
Central American False Coral Snake

Pliocercus dimidiatus Cope 1865:190. Type locality, "Arriba" (Meseta Central, *fide* Savage 1974, Costa Rica). Holotype, National Museum of Natural History (USNM) 6363, sex and size not recorded, collected by C.N. Riotte, date of collection unknown (not examined by authors).
Elapochrus dimidiatus: Günther 1893:107.
Urotheca elapoides: Boulenger 1894:182 (part, *nec* Cope).
Urotheca dimidiata: Gaige et al. 1937:16.
Pliocercus euryzonus dimidiatus: Dunn and Bailey 1939:11.
Pliocercus annellatus Taylor 1951:107. Type locality, "Morehead Finca, 5 mi SW Turrialba, Cartagena, Costa Rica." Holotype, University of Kansas Museum of Natural History (KU) 25370, an adult female, collected by E.H. Taylor, 1947 (not examined by authors).
Pliocercus arubricus Taylor 1954:734. Type locality, "Isla Bonita, Heredia, Costa Rica." Holotype, University of Kansas Museum of Natural History (KU) 31943, an adult female, collected by E.H. Taylor, 19 July 1952 (not examined by authors).
Pliocercus euryzonus: Greene and McDiarmid 1981:211 (part, *nec* Cope).
Pliocercus aequalis dimidiatus: Pérez-Higareda and Smith 1986:128.
Urotheca euryzona: Savage and Crother 1989:335 (part, *nec* Cope).

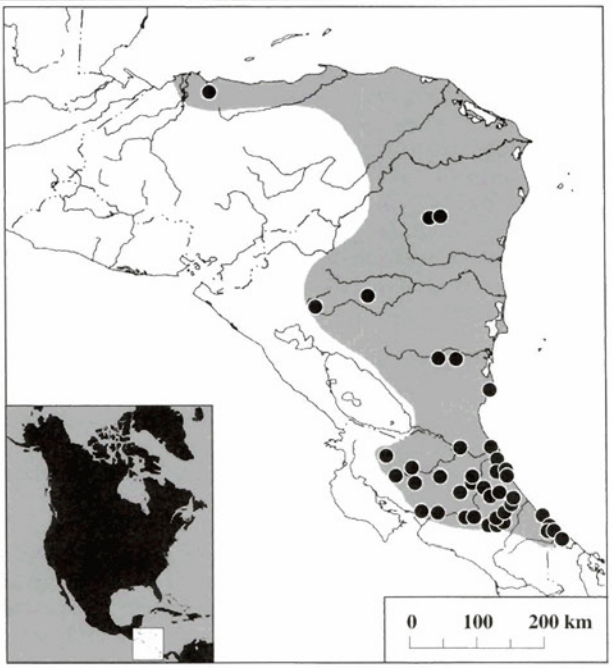
• **CONTENT.** No subspecies are recognized.

• **DEFINITION.** *Pliocercus dimidiatus* is a medium-sized colubrid snake in the bicolor *P. euryzonus* complex, with a maximum known TL of approximately 780 mm (largest recorded specimen had SVL = 464 mm, and the incomplete tail was estimated to be 316 mm long on the basis of the proportions of a specimen with a complete tail, SVL of 345 mm and tail length of 235 mm). The tail is 39–46% of TL.

Head scalation is as follows: usually 8 supralabials (92%, 46 of 50 sides), seldom 9 (8%); infralabials usually 10 (82%, 46 of 56), occasionally 9 (14%, 8 of 56), seldom 11 (4%, 2 of 56); preoculars 2 (45%, 25 of 56) or 3 (55%, 31 of 56); postoculars usually 2 (84%, 47 of 56), occasionally 3 (16%, 9 of 56); temporals usually 1–1 on both sides (86%, 24 of 28), seldom 1–2 on one (2) or both (2) sides (14%, 4 in 28). Ventral scales in males number 124–132 ($\bar{x}$ = 129, N = 9), in females 131–143 ($\bar{x}$ = 136, N = 17). Subcaudals in males number 117–122 ($\bar{x}$ = 120, N = 5), in females 102–120 ($\bar{x}$ = 108, N = 8).

Coloration is mostly black, with 13–22 pale rings on the body, some or all at least 2 scales long ($\bar{x}$ = 17, N = 27), and 6–14 pale rings on the tail ($\bar{x}$ = 8.5, N = 16). Another pale ring extends across the parietals, covering 25–85% of the length of those scales. In life, the pale rings usually are reddish dorsally, occasionally unicolor or mixed with yellow or white, and whitish ventrally. Some dorsal scales in pale rings usually are black-tipped. The nuchal black ring is incomplete in 88% of specimens.

• **DIAGNOSIS.** *Pliocercus dimidiatus* differs from all taxa in the tricolor *P. elapoides* complex in having only bicolored rings (i.e., no separate, complete, yellow and red rings). Fundamentally, *P. dimidiatus* differs from *P. euryzonus* in having: (1) categorically longer pale rings on head, body and tail; (2) usually single secondary temporals (versus usually double); (3) pale rings usually red (versus never red); and (4) nuchal black ring usually incomplete ventrally (versus usually complete).



MAP. Distribution of *Pliocercus dimidiatus*. The type locality is too imprecise to plot (adapted in part from Savage and Crother 1989).

FIGURE 1. *Pliocercus dimidiatus* from the Estación de Biología La Selva, Costa Rica (photograph courtesy of David L. Hardy).

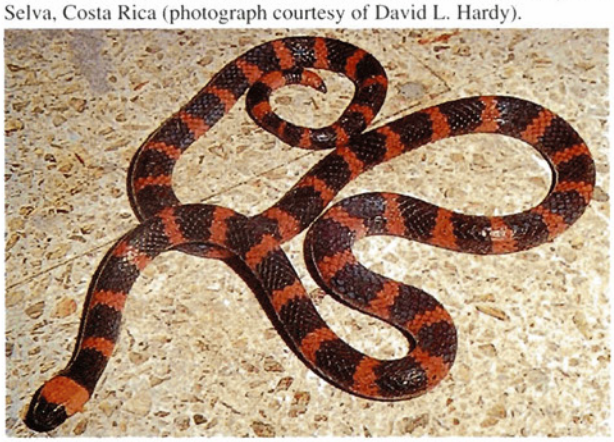


FIGURE 2. *Micrurus multifasciatus hertwigi* from Costa Rica, a model for *P. dimidiatus* (photograph courtesy of Roy W. McDiarmid).

Details expressing these and other differences between *P. dimidiatus* and *P. euryzonus* are as follows: the former invariably has an uninterrupted, long parietal pale ring at least 25% as long as the parietals (versus 15% or less in the latter); usually (86% versus 10%) one secondary temporal on both sides; usually pale rings 2 or more middorsal scales long on at least part of body (96% versus 4%); nuchal black ring usually incomplete (88% versus 12%); usually a maximum of 4 or more subcaudals in any pale ring (93% versus 24%); at least some dorsals in pale rings on body black-tipped (74% versus 31%); dorsal portion of pale rings (including parietal) usually red in life, whitish ventrally, although sometimes mixed with or entirely yellowish or whitish (versus apparently always whitish); preoculars 1–2 (99% versus 45% and never 1).

• **DESCRIPTIONS AND ILLUSTRATIONS.** Original descriptions occur in Cope (1865) and Taylor (1951, 1954), and a redescription is in Smith and Chiszar (1996). Black and white illustrations are in Taylor (1951, 1954), and colored figures are in Campbell and Lamar (1989) and Greene and McDiarmid (1981).

• **DISTRIBUTION.** *Pliocercus dimidiatus* inhabits the Atlantic slopes from Honduras through Costa Rica. Only one record in Honduras (Tela) is known. Occurrence of this species in adjacent Guatemala is possible, but at present no member of the bicolor complex is known there, despite several reports based on bicolored specimens of the tricolor complex.

• **FOSSIL RECORD.** None.

• **PERTINENT LITERATURE.** Little is recorded of the natural history of this species. Pough (1964) recorded predation by the Laughing Falcon (*Herpetotheres cachinnans*). Brodie (1993) confirmed that avian predators recognize and avoid coral snake patterns, and Smith (1975) concluded that avoidance is at least partly genetic. Hayes et al. (1998) noted that the tongue and iris are black in life, and used the name Halloween Snake for the species, as Greene (1997) did earlier.

On the contrary, considerable discussion of its taxonomic status has appeared in the literature, most of it based on single specimens or small series. Exceptions, in which large series were examined, include studies by Savage and Crother (1989) and Smith and Chiszar (1996). The most extreme discrimination of taxa was that of Taylor (1951, 1954), which was largely accepted by Peters and Orejas-Miranda (1970). The opposite extreme is represented by Savage and Crother (1989), who correctly deduced that both *P. annellatus* and *P. arubricus* were no more than variants of the Costa Rican population, but did not differentiate *P. dimidiatus* from *P. euryzonus*. Dunn (in Dunn and Bailey 1939) and Dunn (1944) took an intermediate view, recognizing *P. dimidiatus* as a subspecies of *P. euryzonus*. Pérez-Santos and Moreno (1988, 1991) also presented their opinion that *P. dimidiatus* is distinct, at least at the subspecific level, from *P. e. euryzonus*, which they regarded as limited to Panamá and South America.

Other references to the species are in Cope (1869, mimicry), Köhler (1999, Nicaragua), Orr (1979, mimicry), Peters and Orejas-Miranda (1970, keys, distribution, synonymy), Peters et al. (1986, as preceding), Ruiz-Pérez (1996, key), Savage (1974, 1976, 1980, Costa Rica herpetofauna, type localities), Savage and Villa (1986, Costa Rica), Scott et al.(1983, Costa Rica herpetofauna), and Stuart (1948, mention).

• **REMARKS.** Savage and Crother (1989), in their influential review of the Coral Snake mimics referred by many workers to *Pliocercus*, recognized no subspecies in *Urotheca* (= *Pliocercus*) *euryzona* and included *P. dimidiatus* as a synonym thereof. However, they did not analyze in detail the geographic variation in pattern, color, and scalation in that complex with an eye toward discrimination, and therefore the conclusions by Smith and Chiszar (1996), followed here, were not refuted by the conclusions of the earlier work.

Pliocercus dimidiatus extensively mimics the sympatric *Micrurus multifasciatus*.

• **ETYMOLOGY.** The name *dimidiatus* is from the Latin word meaning "halved," in the sense of the prefix "demi," as in demigod, demiwolf, demitasse, etc. Cope (1865) apparently adopted it in allusion to the Coral Snake-like nature of the pattern, but not in allusion to size (Frank and Ramus 1995).

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